



## UV Fluorescent Total Reduced Sulfur Analyzer Model AF22M-CTRS

**Air Quality  
monitoring**



### 3 selectable modes:

- Continuous TRS
- Continuous SO<sub>2</sub>
- Cyclic SO<sub>2</sub> / TRS



Remote control using ConTACT™ software

### Applications:

- Ambient air monitoring of all sulfur compounds: H<sub>2</sub>S, CH<sub>3</sub>SH, COS, CS<sub>2</sub>, (CH<sub>3</sub>)<sub>2</sub>S, (CH<sub>3</sub>)<sub>2</sub>S<sub>2</sub>...
- Continuous odour monitoring (waste water treatment plants, chemical industries)
- Indoor / workplaces monitoring
- Stack emission monitoring (using a dilution-based sampling system)

### Exclusive features:

- Type approvals: TÜV report n° 936/21206773/C (Germany), US EPA n° EQSA-0802-149 (USA) for AF22M
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software with enhanced speed display
- Real-time synoptic flow diagram display
- User programmable ranges and average time
- Auto-ranging
- Temperature and pressure compensation
- Automatic and programmable response time
- Real time calibration graph
- Built-in storage of 2 months 1/4 h average data (up to 1 year with the optional memory extension )
- Built-in double serial interface (RS 232/RS 422) for remote control & maintenance



## UV Fluorescent Total Reduced Sulfur / Sulfur Dioxide Analyzer

### Specifications:

- Ranges : 0 - 0.10 / 0.25 / 0.50 / 1 ppm TRS
- Duration of cycle mode TRS / SO<sub>2</sub>: 2x225 seconds
- Response time:
  - TRS mode: 120 seconds
  - SO<sub>2</sub> / TRS mode: max. 450 seconds
- Zero drift: < 1% / week (with zero cycle on)
- Span drift: < 1% / week
- Linearity: +/- 1% of full scale
- Selective SO<sub>2</sub> scrubber capacity: 500 ppm/h
- TRS / SO<sub>2</sub> converter: Quartz, 870 °C
- Dim. AF22M: 545 x 483 x 133 mm (W x D x H)
- Dim. CTRS: 545 x 378 x 133 mm (W x D x H)
- Weight AF22M: approx. 10 kg
- Weight CTRS: approx. 9 kg
- Operating temperature: +10 °C to + 35 °C
- Serial Communication : 2 x RS 232 or 422

### Utilities:

- Power supply: 230 V, 50 Hz or 115 V, 60 Hz
- Consumption:
  - 160VA for CTRS
  - 60 VA for AF22M

### Options:

- Permeation bench (built-in AF22M module)
- Special version for measurement in CO<sub>2</sub> sample
- ESTEL electronic board (1 or 2) with:
  - 4 independent analog inputs
  - 4 independent analog outputs
  - 4 remote control inputs
  - 6 dry contacts

### Distributed by:

### Operating principle:

Model AF22M-CTRS consists in two associated modules:

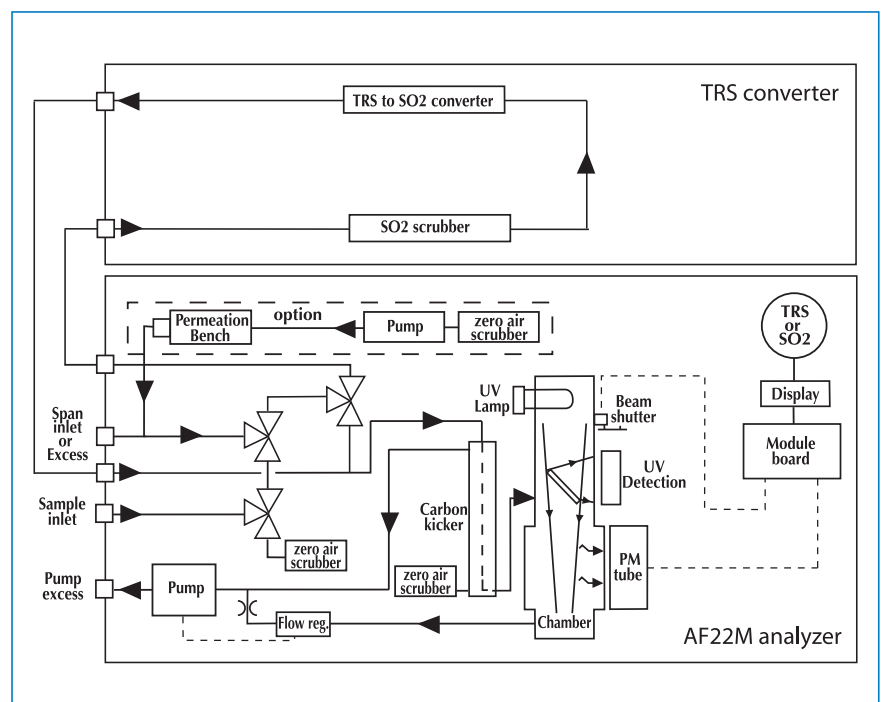
- a TRS → SO<sub>2</sub> converter (CTRS-S2)
- a SO<sub>2</sub> analyzer (AF22M)

In continuous TRS mode, the sample introduced in Model AF22M goes through the TRS converter, where all sulfur dioxide is removed by a SO<sub>2</sub> scrubber. The sample is then oxidized in a high temperature catalytic converter. From that stage, reduced sulfur compounds have been transformed into SO<sub>2</sub> and the sample is then re-injected in the AF22M analyzer. The value displayed on the AF22M corresponds to the TRS concentration in the initial sample.

Model AF22M uses the universally known UV fluorescent principle, consisting in detecting the characteristic fluorescence radiation emitted by SO<sub>2</sub> molecules. In the presence of a specific wavelength of UV light (214 nm), the SO<sub>2</sub> molecules reach a temporary excited electronic state. The subsequent relaxation produces a fluorescence radiation which is measured by a non-cooled photomultiplier tube (PM).

Model AF22M was developed to meet customers' requirement for reduced and easier maintenance. Equipped with an enhanced aromatic hydrocarbon scrubbing system that guarantees complete removal of these interferences, the AF22M also achieves very high sensitivity and stability through the use of an optical shutter to compensate for eventual electronics drifts.

For more information related to Model AF22M, report to AF22M specific brochure.



Specifications subject to modifications without prior notice - ref.: 1108 - AF22M-CTRS\_uk - Gimmick